12. A method according to claim 10, wherein said two selected parameters are the area of a fault and the intensity of a fault in percentages.

13. A method according to claim 10, wherein said two selected parameters are the length of a fault and the intensity of a fault.

14. A method according to claim 10, wherein the fabric swatch is comprised of a plurality of rectangle units whose sides extend parallel and perpendicularly to boundaries of the fabric, and wherein one of the plurality of parameters associated with each fault is the number of units in two directions occupied by the fault.

15. A method according to claim 14, wherein said two selected parameters are the number of occupied units and the intensity of a fault in percentage.

16. A method according to claim 10, wherein said image further comprises representations of a third parameter.

17. A method according to claim 16, wherein said third parameter is the intensity of a fault.--

REMARKS

Claims 1-5 and 7-17 are currently pending, wherein claims 1-5 and 7-9 have been amended to more closely conform to U.S. practice and claims 10-17 have been added without the addition of new matter. Favorable reconsideration is respectfully requested in view of the remarks presented herein below.

In paragraph 1, the Office Action objects to the abstract of the disclosure for incorrectly representing reference number 13 as an image. Applicants hereby amend the abstract as suggest by the Action, thereby addressing the Examiner's concerns.

In paragraph 2, the Office Action objects to the specification for various informalities. Applicants hereby amend the specification as suggested by the Action, thereby addressing the Examiner's concerns.

In paragraph 3, the Office Action objects to drawing 9 because of alleged smudges in the top left hand corner of the drawing. In response, applicants herein provide a clean copy of Figure 9, thereby addressing the Examiner's concerns.

In paragraph 4, the Office Action rejects claims 8-9 under 35 U.S.C. §112, second paragraph, as being indefinite. Applicant's hereby amend claims 8 and 9 to depend from claim 7, thereby addressing the Examiner's concerns.

In paragraph 7, the Office Action rejects claims 1-5 under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,100,989 to Leuenberger ("Leuenberger"). Applicants respectfully traverse this rejection.

The invention provides a method by which fault data acquired from textile fabrics can easily be compared with one another and evaluated as to their significance in a differentiated manner. The method of the invention is advantageous in that it enables a structured and standardized assessment of faults in textile fabrics to be carried out.

Accordingly, independent claim 1, as amended, defines a method of evaluating faults detected on textile fabrics. The method includes, *inter alia*, the steps of receiving data associated with faults detected on a swatch of the surface of the fabric; sorting the data associated with detected faults according to at least two parameters included in said data; and representing the detected faults in an image as a function of the at least two parameters.

It is well known that in order to support a rejection under 35 U.S.C. §102, the applied reference must teach each and every claimed element. In the present case, independent claim 1 is not anticipated by Leuenberger for at least the reason that Leuenberger fails to disclose each and every claimed element. For example, Leuenberger fails to disclose the step of sorting the data associated with detected faults according to a least two parameters included in said data, and representing the detected faults in an image as a function of the at least two parameters.

The Office Action asserts that Leuenberger discloses sorting the data as claimed inasmuch as Leuenberger discloses storing the color intensity and position of the area from which a defect is recorded. To support this assertion the Office Action points to column 5, lines 36-66 of Leuenberger. This assertion is unfounded for the following reason.

The cited passage (i.e., column 5, lines 36-66 of Leuenberger) discloses that a probability signal, along with data relating to the position of the area from which the signal is derived, is stored in memory in storage locations associated with relative positions on the fabric web. However, nowhere in the cited passage is there any disclosure of *sorting* the data associated with detected faults according to a least two parameters included in said data, and representing the detected faults in an image as a *function* of the at least two parameters as claimed. Accordingly, independent claim 1 is patentably distinguishable over Leuenberger.

Claims 2-5 depend from independent claim 1. Therefore claims 2-5 are patentably distinguishable over Leuenberger for at least those reasons presented above with respect to claim 1. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-5 under 35 U.S.C. §102.

In paragraph 9, the Office Action rejects claims 7-9 under 35 U.S.C. §103(a) as allegedly being unpatentable over Leuenberger in view of U.S. Patent No. 5,544,256 to Brecher et al. ("Brecher"). Applicants respectfully traverse this rejection.

Claim 7, from which claims 8 and 9 depend, defines a method for evaluating faults detected on textile fabrics which includes, *inter alia*, representing the detected faults in an image as a function of the at least two parameters, wherein the image consists of fields, a class for the faults being associated with each field.

It is well known that in order to support a rejection under 35 U.S.C. §103, three basic criteria must be met. A first of these criteria is that there must be some motivation to combine/modify the applied references. In the present case, the Office Action asserts it would have been obvious to define fields in an image as claimed inasmuch as the Office Action asserts that defining feature spaces in images of defects is well known to one of ordinary skill in the art. This assertion is unfounded for the following reason.

First, the fact that a claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish *prima facie* obviousness. MPEP § 2143.01, citing *Ex parte Levengood*, 28 USPQ 2d 1300 (Bd. Pat. App. & Inter. 1993), states:

> [a] statement that modifications of the prior art to meet the claimed invention would have been "'well within the ordinary skill of the art at the time the claimed invention was made'" because the references relied upon teach all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teaching of the references.

However, the Office Action has not provided an objective reason to modify Leuenberger to include the allegedly well known method of classifying defects. Accordingly, the Office Action's allegation that it would have been "within the level of ordinary skill in the art" to define fields in an image, each field being associated with a class of defect is not sufficient to establish a *prima facie* case of obviousness. Absent any motivation or suggestion to modify the teaching of Leuenberger, the rejection of claims 7-9 under 35 U.S.C. §103 is improper.

A second of the three basic criteria, is that the combination must teach each and every claimed element. In the present case, claims 7-9 are not rendered unpatentable over the combination of Leuenberger and Brecher for at least the reason that the combination fails to disclose or suggest each and every claimed element.

Both Leuenberger and Brecher fail to disclose or suggest the step of representing the detected faults in an image as a function of the at least two parameters, wherein the image consists of fields, a class for the faults being associated with each field, as claimed. Therefore, the combination of Leuenberger and Brecher cannot possibly disclose said feature. As a result, even if one skilled in the art were motivated to combine Leuenberger and Brecher, the combination would still fail to render claims 7-9 unpatentable for at least the reason that the combination fails to disclose or suggest each and every claimed element. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 7-9 under 35 U.S.C. §103.

The application is in condition for allowance. Notice of same is earnestly solicited. Should the Examiner have any questions regarding this application, the Examiner is invited to call the undersigned at the telephone number provided below.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: Penny L Caudle
Penny L. Caudle
Registration No. 46,607

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620

Date: February 3, 2003

ATTACHMENT

Amendments to Specification:

page 17, line 5:

Figure 7 shows an image 44 with axes 45 and 46. Values for the length of a fault, for example in cm, are plotted along the axis [41] 45 and values for the intensity of a fault, for example in percentages, along the axis 46. This image 44 is also divided into fields or classes by line 47 to 52. The number of detected faults is indicated by the figures in the fields, as already known from Figure 3. Figure 8 shows an image 53 with axes 54 and 55. Values for the number of occupied fields 9 according to Figure 2 are plotted along the axis 54 and values for the intensity of a fault along the axis 55. This image 53 is also divided into fields or classes by lines 56 to 61. The number of detected faults is indicated by the figures in the fields, as already known from Figure 3.

Page 5, line 27:

Figure 9 shows an image 62 with axes 63 and 64. Values for the length of faults in cm are plotted along the axis 63. The axis 64 is divided into a plurality of zones 64a to e, and values for the intensity are given in percentages in each zone. Each of the zones 64a to 64e relates to a certain type of fault, for example the zone 64a relates to weft faults, the zone 64b to warp faults, the zone 64c to surface faults, the zone 64d to edge faults and the zone 64e to holes. Line 75 to [78] 76 again divided the image 62 into fields or classes in which numerical values indicate the number of detected faults in the class concerned. The position of the numerical value in relation to the zone on the axis 64 indicates the intensity of the fault. Several numerical values may thus also occur in one class. The image 62 thereby illustrates a classification which is based on different types of fault. Different known types of fault may be grouped together as desired. So, for example, the term "weft faults" is here generally understood to mean faults which predominantly extend weftwise in a woven fabric. Such faults are known under the following terms: join, fell, straightening point, shed, weft bar, lashing-in, slubber, fly, thread breakage, mispick.

Page 1, line 1: --FIELD OF THE INVENTION--
Page 1, line 3: --BACKGROUND OF THE INVENTION--
Page 2, line 1: --SUMMARY OF THE INVENTION--
Page 3, line 3: --BRIEF DESCRIPTION OF THE DRAWINGS--
Page 3, line 9: --DETAILED DESCRIPTION--
Page 10, line 1: What is claimed is [Claims]:

abstract:

A process is disclosed for evaluating data obtained from textile fabrics. In order to devise a process which allows data obtained from textile fabrics to be easily compared, assessed in a differentiated manner as to their significance and evaluated, the data are determined in a section (3a,3b) of the surface of the fabric, sorted according to at least two parameters (13,14) and represented in an image (12, [13] 30) as a function of the parameters.

Claim amendments:

1. Method for evaluating faults [determined] detected on textile fabrics [(1)], the method comprising the steps of: [characterized in that]

receiving data associated with [the] faults [are determined] detected on a swatch [(3a, 3b)] of the surface of the fabric[, that];

sorting the data associated with detected faults [are sorted] according to at least two parameters included in said data; [(13, 14),] and [that]

representing the detected faults [are represented] in an image [(12, 30)] as a function of the at least two parameters.

2. Method according to claim 1, [characterized in that] wherein the swatch [in which faults are detected] forms a rectangle whose sides extend parallel and perpendicularly to boundaries of the fabric.

3. Method according to claim 1, [characterized in that] wherein said data associated with the faults includes the extent of a detected fault in two directions [(s, k) of an area] in the fabric [is provided as a parameter].

4. Method according to claim 1, [characterized in that] wherein said data associated with the faults includes the intensity [(delta i)] of a fault [is provided as a further parameter].

5. Method according to claim 1, [characterized in that] wherein said data associated with the faults includes the form [(23 - 29)] of a fault [is represented as a further parameter].

6. Canceled

7. Method according to claim 1, [characterized in that] wherein the image consists of fields, a class for the faults being associated with each field.

8. Method according to claim [6] 7, [characterized in that] wherein values for a detected number of faults in the fabric are associated with the classes.

9. Method according to claim [6] 7, [characterized in that] wherein the classes are divided into groups by boundaries [(97, 98)].

New Claims:

10. A method for classifying faults detected on textile fabrics, the method comprising the steps of:

receiving a plurality of parameters associated with each detected fault on a swatch of fabric;

classifying the detected faults based on a selected set of said plurality of parameters; and

representing the classification of each detected fault in an image, wherein said image comprises:

at least two axes representing two selected parameters from said selected set of parameters; and

a series of fields which lie in a plane defined by the values of said two selected parameters, the extent of each field characterizing a class of fault.

11. A method according to claim 10, wherein said two selected parameters are the length and width of a fault and the fields characterize the detected faults according to size.

12. A method according to claim 10, wherein said two selected parameters are the area of a fault and the intensity of a fault in percentages.

13. A method according to claim 10, wherein said two selected parameters are the length of a fault and the intensity of a fault.

14. A method according to claim 10, wherein the fabric swatch is comprised of a plurality of rectangle units whose sides extend parallel and perpendicularly to boundaries of the fabric, and wherein one of the plurality of parameters associated with each fault is the number of units in two directions occupied by the fault.

15. A method according to claim 14, wherein said two selected parameters are the number of occupied units and the intensity of a fault in percentage.

16. A method according to claim 10, wherein said image further comprises representations of a third parameter.

17. A method according to claim 16, wherein said third parameter is the intensity of a fault.